

ABSTRAK

Tanaman padi merupakan komoditas pertanian utama di Indonesia yang berperan penting dalam pemenuhan kebutuhan pangan masyarakat. Keberhasilan budidaya padi sangat ditentukan oleh pemilihan varietas bibit padi unggul yang tepat. Namun, proses pemilihan bibit padi masih sering dilakukan secara subjektif berdasarkan pengalaman atau kebiasaan petani, sehingga berpotensi menghasilkan keputusan yang kurang optimal. Oleh karena itu, penelitian ini bertujuan untuk membangun Sistem Pendukung Keputusan (SPK) berbasis website yang mampu merekomendasikan varietas bibit padi unggul secara objektif dan terukur. Penelitian ini menggunakan data varietas bibit padi bersertifikat yang diperoleh dari Balai Pengawasan Sertifikasi Benih Tanaman Pangan dan Hortikultura Dinas Pertanian Jawa Timur. Metode *ENTROPY* digunakan untuk menentukan bobot kriteria secara objektif berdasarkan tingkat variasi data, sedangkan metode *TOPSIS* digunakan untuk melakukan perankingan alternatif berdasarkan kedekatannya dengan solusi ideal positif dan solusi ideal negatif. Kriteria yang digunakan meliputi umur tanaman, anakan produktif, bobot 1000 butir, potensi hasil, kadar amilosa, rasa nasi, adaptasi lingkungan, serta daya tahan terhadap hama dan penyakit. Hasil perhitungan metode *ENTROPY* menunjukkan bahwa kriteria potensi hasil dan anakan produktif memiliki bobot tertinggi, sehingga menjadi faktor paling dominan dalam proses pengambilan keputusan. Berdasarkan hasil perankingan menggunakan metode *TOPSIS*, varietas bibit padi dengan nilai preferensi tertinggi dan direkomendasikan sebagai bibit padi unggul adalah Suppadi P-284 dengan nilai preferensi sebesar 0,6727, diikuti oleh Suppadi P-61 dengan nilai 0,6703, PP4 dengan nilai 0,6153, Suppadi P-292 dengan nilai 0,6078, dan Sembada 168 dengan nilai 0,6029, yang seluruhnya masuk dalam kategori Direkomendasikan. Sementara itu, varietas PP3, BSHS 3H, LESTARI 3, SEMBADA B9, dan SEMBADA B8 termasuk dalam kategori Cukup Direkomendasikan. Sistem pendukung keputusan kemudian diimplementasikan dalam bentuk website dan dievaluasi menggunakan metode User Acceptance Testing (*UAT*). Hasil pengujian menunjukkan bahwa sistem dapat diterima dengan baik oleh pengguna dari aspek fungsionalitas, kemudahan penggunaan, serta kesesuaian hasil rekomendasi. Dengan demikian, sistem yang dikembangkan mampu memberikan rekomendasi varietas bibit padi unggul secara objektif, akurat, dan disertai peringkat yang jelas, sehingga dapat membantu petani dan pihak terkait dalam mengambil keputusan pemilihan bibit padi unggul secara lebih tepat dan efisien.

Kata Kunci : Bibit Padi, *ENTROPY*, Sistem Pendukung Keputusan, *TOPSIS*

ABSTRACT

Rice is a major agricultural commodity in Indonesia that plays a vital role in meeting the population's food needs. The success of rice cultivation is largely determined by the selection of the right high-yielding rice seed varieties. However, the process of selecting rice seeds is still often carried out subjectively based on farmers' experience or habits, which can lead to suboptimal decisions. Therefore, this study aims to develop a web-based Decision Support System (DSS) capable of objectively and measurably recommending high-quality rice seed varieties. This study utilizes data on certified rice seed varieties obtained from the Office of Seed Certification Supervision for Food Crops and Horticulture under the East Java Provincial Department of Agriculture. The ENTROPY method was used to objectively determine criterion weights based on the level of data variation, while the TOPSIS method was used to rank alternatives based on their proximity to the positive ideal solution and the negative ideal solution. The criteria used include plant age, productive tillers, 1000-grain weight, yield potential, amylose content, rice taste, environmental adaptation, and resistance to pests and diseases. The results of the ENTROPY method calculations indicate that the yield potential and productive tillers criteria have the highest weights, making them the most dominant factors in the decision-making process. Based on the ranking results using the TOPSIS method, the rice seed variety with the highest preference score and recommended as a high-yielding rice seed is Suppadi P-284 with a preference score of 0.6727, followed by Suppadi P-61 with a score of 0.6703, PP4 with a score of 0.6153, Suppadi P-292 with a value of 0.6078, and Sembada 168 with a value of 0.6029, all of which fall into the Recommended category. Meanwhile, the varieties PP3, BSHS 3H, LESTARI 3, SEMBADA B9, and SEMBADA B8 are classified as Moderately Recommended. The decision support system was then implemented as a website and evaluated using the User Acceptance Testing (UAT) method. The test results showed that the system was well-received by users in terms of functionality, ease of use, and the suitability of the recommendation results. Thus, the developed system is capable of providing recommendations for high-yielding rice seed varieties objectively, accurately, and with clear rankings, thereby helping farmers and relevant parties make more precise and efficient decisions regarding the selection of high-yielding rice seeds.

Keywords: Rice Seeds, ENTROPY, Decision Support System, TOPSIS